APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,466	03/01/2004	Stephen P. Dulac	PD-202097	9945

20991   7590   09/01/2009

THE DIRECTV GROUP, INC.
PATENT DOCKET ADMINISTRATION
CA / LA1 / A109
2230 E. IMPERIAL HIGHWAY
EL SEGUNDO, CA 90245

EXAMINER
LOUIE, OSCAR A

ART UNIT	PAPER NUMBER
2436	

MAIL DATE	DELIVERY MODE
09/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>22 June 2009</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-24</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-23</u> is/are rejected.
7) ☒ Claim(s) <u>24</u> is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This non-final action is in response to the Request for Continued Examination filing of

06/22/2009. Claims 1-24 are pending and have been considered as follows.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 5-9are rejected under 35 U.S.C. 103(a) as being unpatentable over Szymanski

(US-6148081-A) in view of Liao et al ("The Split and Merge Protocol for Interactive Video-on-

Demand") and in further view of Spies (US-6055314-A).

Claim 5:

Szymanski discloses a method of purchasing a program on demand comprising,

-      "receiving a first unencrypted portion of the program for purchase from a headend," (i.e.

"The interactive television signal includes an interactive portion consisting of application

code or control information, as well as an audio-video portion consisting of a television

program") [Szymanski column 1 lines 32-35];

-   "storing the received first unencrypted portion of the program for later purchase on a
    subscriber's digital video recorder," (i.e. "The set-top box receives the signal transmitted
    by the broadcast service provider, separates the interactive portion from the audio-video
    portion and decompresses the respective portions of the signal") [Szymanski column 1
    lines 43-47];

-   "offering the program for purchase," (i.e. "the carousel may comprise an electronic
    commerce application which allows interactive television users to make purchases via
    credit card transactions") [Szymanski column 9 lines 10-13];

-   "selecting the program for purchase," (i.e. "The credential can be created by secure
    means so that it can be determined at run time whether the credential was in fact created
    by the producer of the credit card application (which may be referred to as the "grantor
    carousel")") [Szymanski column 9 lines 26-30];

-   "if the storage of the program is authorized, splicing the first unencrypted portion of the
    selected program with the remaining portion of the selected program to form a complete
    program" (i.e. "Set-top box 22 processes the packetized signal to reconstruct the
    television programs and interactive applications embodied in the signal. The
    reconstructed applications are executed in the set-top box, while the reconstructed
    television programs are passed to the television, where they are displayed") [Szymanski
    column 5 lines 35-40];

-   "storing the complete program on the digital video recorder for a predetermined period of
    time" (i.e. "The set-top box then reconstructs the modules from the corresponding
    packets and reconstructs the television programs from the packets containing the

associated audio and video data. As explained above, the modules are stored in RAM 37,

where they are available for use by applications executing in the control unit 35")

[Szymanski column 8 lines 35-40];

but, Szymanski does not explicitly disclose,

- "retrieving the stored first unencrypted portion of the selected program from the

  subscriber's digital video recorder for viewing by the subscriber," although Liao et al do

  suggest a customer requesting programs through a VoD service, as recited below;

- "receiving a remaining portion of the selected program from the headend," although Liao

  et al do suggest video program batching, as recited below;

- "authorizing storage of the program by the subscriber's digital video recorder according

  to a subscription service level," although Spies does suggest usage of an IC card for

  authentication, as recited below;

however, Liao et al. do disclose,

- "With VoD services, customers may select programs from massive, remote video

  archives, view them when they wish, and interact with the programs using VCR-like

  functions, such as fast forward and rewind" [Liao et al. page 51];

- "When a user in a batch initiates a user interaction, the protocol splits off the interactive

  user from the original batch and temporarily assigns that user to a new video stream"

  [Liao et al. page 52];

whereas, <u>Spies</u> does disclose,

- "For example, the purchaser 26 might insert the IC card 50 into the purchaser's own

  computing unit (not shown in this figure) resident at his own home which is

  interconnected to the video merchant computing unit 44 via a distribution network"

  [<u>Spies</u> column 6 lines 35-39];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to include, "retrieving the stored first unencrypted portion of the selected

program from the subscriber's digital video recorder for viewing by the subscriber" and

"receiving a remaining portion of the selected program from the headend" and "authorizing

storage of the program by the subscriber's digital video recorder according to a subscription

service level," in the invention as disclosed above by <u>Szymanski</u> for the purposes of providing

access to the program content and security to permit access to the content that they requested and

purchased legitimately.

Claim 6:

<u>Szymanski</u>, <u>Spies</u>, and <u>Liao et al.</u> disclose a method of purchasing a program on demand, as in

Claim 5 above, further comprising,

- "receiving the first unencrypted portion of the program over a channel that is hidden to

  the subscriber but recognized by the digital video recorder" (i.e. "In addition to the

  broadcast channel between the broadcast station and receiving station, there may be other

  channels, such as a modem channel (which may also be referred to as an http, or

  hypertext transfer protocol, channel") [<u>Szymanski</u> column 5 lines 43-47].

Claim 7:

Szymanski, Spies, and Liao et al. disclose a method of purchasing a program on demand, as in

Claim 6 above, but Szymanski and Liao et al. do not explicitly disclose,

- "receiving information about the program in addition to the first unencrypted-portion,"

   although Spies does suggest sending program information, as recited below;

however, Spies does disclose,

- "Upon selection, the STB 230 sends a request for information on the selected programs.

   The headend server 208 retrieves the information from program information database 216

   and transmits the information over the network 206 to the requesting STB 230" [Spies

   column 15 lines 32-36];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to include "receiving information about the program in addition to the first

unencrypted-portion," in the invention as disclosed above by Szymanski and Liao et al. for the

purposes of providing program content information prior to a request and purchase of the entire

content.

Claim 8:

Szymanski, Spies, and Liao et al. disclose a method of purchasing a program on demand, as in

Claim 7 above, but Szymanski and Liao et al. do not explicitly disclose,

- "the information in addition to the first unencrypted portion further comprises

   information selected from the group comprising promotional video, additional description

   about the program and program reviews," although Spies does suggest program

   information details, as recited below;

however, Spies does disclose,

- "The program information might include title, cast, director, rating, brief description, whether it is available in closed caption or another language, price, and so on. The subscriber can review the information, request additional information on the programs or information on different programs, order a program, or exit the VOD application" [Spies column 15 lines 37-42];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include "the information in addition to the first unencrypted portion further comprises information selected from the group comprising promotional video, additional description about the program and program reviews," in the invention as disclosed above by Szymanski and Liao et al. for the purposes of providing detailed program content information prior to a request and purchase of the entire content.

Claim 9:

Szymanski, Spies, and Liao et al. disclose a method of purchasing a program on demand, as in Claim 8 above, but Szymanski and Liao et al. do not explicitly disclose,

- "offering a free preview of a program from the stored first unencrypted portion,"
   although Spies does suggest additional program information details, as recited below;

however, Spies does disclose,

- "The program information might include title, cast, director, rating, brief description, whether it is available in closed caption or another language, price, and so on. The

subscriber can review the information, request additional information on the programs or

information on different programs, order a program, or exit the VOD application" [Spies

column 15 lines 37-42];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to include "offering a free preview of a program from the stored first

unencrypted portion," in the invention as disclosed above by Szymanski and Liao et al. for the

purposes of providing detailed program content information prior to a request and purchase of

the entire content.

3.   Claims 1-4, 10-12, & 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Szymanski (US-6148081-A) in view of Liao et al ("The Split and Merge Protocol for

Interactive Video-on-Demand") in view of Spies (US-6055314-A) in view of Gorbatov et al.

(US-20030018980).

Claim 1:

Szymanski discloses a method of providing a video program in response to a demand by a

subscriber comprising,

> "delivering a first portion of the video program available for viewing on demand," (i.e.
>
> "The interactive television signal includes an interactive portion consisting of application
>
> code or control information, as well as an audio-video portion consisting of a television
>
> program") [Szymanski column 1 lines 32-35];

- "storing the first portion of the video program as unencrypted data on a digital video recorder (DVR)," (i.e. "The set-top box receives the signal transmitted by the broadcast service provider, separates the interactive portion from the audio-video portion and decompresses the respective portions of the signal") [Szymanski column 1 lines 43-47];

- "offering the video program for purchase by the subscriber," (i.e. "the carousel may comprise an electronic commerce application which allows interactive television users to make purchases via credit card transactions") [Szymanski column 9 lines 10-13];

- "accepting a subscriber demand to purchase the complete video program," (i.e. "The credential can be created by secure means so that it can be determined at run time whether the credential was in fact created by the producer of the credit card application (which may be referred to as the "grantor carousel")") [Szymanski column 9 lines 26-30];

but, Szymanski does not explicitly disclose,

- "the video program is repeatedly transmitted on one of a plurality of channels by a headend, each repeated transmission separated from a previous transmission by a predetermined period of time," although Gorbatov et al. do suggest a headend and typical transmissions comprising multiple parts sent at different intervals, as recited below;

- "inserting a trigger into the video program at a predetermined transition point," although Gorbatov et al. do suggest triggers, as recited below;

- "retrieving the stored first portion of the at least one video program from the DVR after accepting a subscriber demand to purchase the complete video program," although Liao et al. do suggest receiving video content at the set top box, as recited below;

- "switching from the stored first unencrypted portion of the at least one video program to the remaining portion of the purchased video program at a time indicated by the trigger," although Liao et al. do suggest splitting a user off from an original batch and assigning the user to a new video stream, as recited below;

- "authorizing capture and decryption of a remaining portion of purchased video program," although Spies does suggest cryptographic keys controlling access to each video program, as recited below;

however, Gorbatov et al. do disclose,

- "…Enhanced content extracted from a DTV broadcast signal may include a variety of enhanced TV resources such as ATVEF triggers to update information displayed on a visual display (such as the screen of TV 10 or another monitor), Universal Resource Locators (URLs), metadata, scripts, Java applets, HTML, web pages, images, or other useful data…" [page 2 para 0014];

- "…Broadcast head-end 18 broadcasts the DTV signal to the set top box 12 over the broadcast network 14 using well known methods…The broadcast head-end may also be known as a transport operator…runs a video delivery infrastructure that includes a transport for ATVEF data. The enhanced TV stream 20 may be created by a content creator (not shown). The content creator originates the content components of the enhancement including audio, video, graphics, layout, interaction and triggers. The content creator creates the enhanced TV stream to comprise the TV content 22 (e.g., one or more TV programs having at least audio and video portions) and zero or more ATVEF triggers 24…" [page 2 para 0016];

whereas, <u>Liao et al.</u> do disclose,

- "With VoD services, customers may select programs from massive, remote video

  archives, view them when they wish, and interact with the programs using VCR-like

  functions, such as fast forward and rewind" [<u>Liao et al.</u> page 51];

- "When a user in a batch initiates a user interaction, the protocol splits off the interactive

  user from the original batch and temporarily assigns that user to a new video stream"

  [<u>Liao et al</u> page 52];

and whereas, <u>Spies</u> does disclose,

- "The video content provider 22 maintains a video program storage 30 which keeps the

  video content programs and a program keys database 32 which stores cryptographic

  program keys that correspond to associated video content programs. There is one

  program key for each video content program" [<u>Spies</u> column 5 lines 14-19];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "the video program is repeatedly transmitted on one of a

plurality of channels by a headend, each repeated transmission separated from a previous

transmission by a predetermined period of time" and "inserting a trigger into the video program

at a predetermined transition point" and "retrieving the stored first portion of the at least one

video program from the DVR after accepting a subscriber demand to purchase the complete

video program" and "switching from the stored first unencrypted portion of the at least one video

program to the remaining portion of the purchased video program at a time indicated by the

trigger" and "authorizing capture and decryption of a remaining portion of purchased video

program," in the invention as disclosed above by <u>Szymanski</u> for the purposes of securely

accessing the program content that the subscriber requested and purchased and being able to play

the program content as requested by a subscriber.

Claim 2:

<u>Szymanski</u>, <u>Gorbatov et al.</u>, <u>Spies</u>, and <u>Liao et al.</u> disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, their combination further

comprising,

-   "delivering a portion of at least one video program on a hidden channel" (i.e. "In

    addition to the broadcast channel between the broadcast station and receiving station,

    there may be other channels, such as a modem channel (which may also be referred to as

    an http, or hypertext transfer protocol, channel") [<u>Szymanski</u> column 5 lines 43-47].

Claim 3:

<u>Szymanski</u>, <u>Gorbatov et al.</u>, <u>Spies</u>, and <u>Liao et al.</u> disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, but the combination of

<u>Szymanski</u>, <u>Gorbatov et al.</u>, and <u>Spies</u> do not explicitly disclose,

-   "the remaining portion comprises less than all of the program and including at least the

    portion not stored in the first portion," although <u>Liao et al.</u> do suggest video program

    batching, as recited below;

however, <u>Liao et al.</u> do disclose,

-   "Batching can reduce the per-user video delivery cost. (Batching here does not

    necessarily mean waiting a certain amount of time before serving user requests—it

    simply means resource sharing)" [<u>Liao et al</u> page 51];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "the remaining portion comprises less than all of the program

and including at least the portion not stored in the first portion" in the invention as disclosed

above by Szymanski, Gorbatov et al., and Spies since it would have been obvious for the

remaining portion of any split portion to be less than the whole of two split portions together and

not be a part of the first portion since the remaining portion is not the first portion.

Claim 4:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, but the combination of

Szymanski, Gorbatov et al., and Spies do not explicitly disclose,

- "switching to the remaining portion at one of a plurality of predetermined transition
  points determined by the trigger," although Liao et al. do suggest split and merge
  operations, as recited below;

however, Liao et al. do disclose,

- "Split and Merge (SAM) refers to the split and merge operations incurred when each user
  performs user interactions.") [Liao et al. page 51];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "switching to the remaining portion at one of a plurality of

predetermined transition points determined by the trigger," in the invention as disclosed above

by Szymanski, Gorbatov et al., and Spies for the purposes of providing non-interrupted program

interaction.

Claim 10:

Szymanski, Spies, and Liao et al. disclose a method of providing a video program in response to a demand by a subscriber, as in Claim 6 above, but Szymanski and Spies do not explicitly disclose,

- "said step of splicing the first unencrypted portion of the selected program with the remaining portion of the selected program to form the complete program comprises the steps of: inserting triggers at predetermined transition points in the remaining portion of the selected program," although Gorbatov et al. do suggest triggers, as recited below;

- "delivering the inserted triggers with the program," although Liao et al. do suggest split and merge, as recited below;

- "identifying the inserted triggers at the digital video recorder for switching from the stored first unencrypted portion of the program to the remaining portion of the program," although Liao et al. do suggest split and merge, as recited below;

however, Gorbatov et al. do disclose,

- "…Enhanced content extracted from a DTV broadcast signal may include a variety of enhanced TV resources such as ATVEF triggers to update information displayed on a visual display (such as the screen of TV 10 or another monitor), Universal Resource Locators (URLs), metadata, scripts, Java applets, HTML, web pages, images, or other useful data…" [page 2 para 0014];

whereas, Liao et al. do disclose,

- "Split and Merge (SAM)" [Liao et al. page 52];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to include "delivering the inserted triggers with the program," and

"identifying the inserted triggers at the digital video recorder for switching from the stored first

unencrypted portion of the program to the remaining portion of the program" in the invention as

disclosed above by Szymanski and Spies since it is suggested that the set-top box would require

the delivery and identification of some form of instructions or "triggers" to perform specific

functions (i.e. "Split and Merge") [Liao et al. page 52].

Claims 11 & 12:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 10 above, their combination

further comprising,

-   "the triggers are delivered with the program" and "triggers are included with a service's

    metadata," (i.e. "…Enhanced content extracted from a DTV broadcast signal may include

    a variety of enhanced TV resources such as ATVEF triggers to update information

    displayed on a visual display (such as the screen of TV 10 or another monitor), Universal

    Resource Locators (URLs), metadata, scripts, Java applets, HTML, web pages, images,

    or other useful data…") [Gorbatov et al. page 2 para 0014].

Claim 20:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, but the combination of

Szymanski, Spies, and Liao et al. do not explicitly disclose,

- "the trigger is included in a vertical blanking interval of the video program," although

    Gorbatov et al. do suggest vertical blanking interval, as recited below;

however, Gorbatov et al. do disclose,

- "ATVEF triggers are described in the ATVEF Specification in section 1.1.5... triggers

    may be transmitted on vertical blanking interval (VBI) line 21 of a National Television

    Standards Committee (NTSC) television signal...") [page 2 para 0017-0018];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "the trigger is included in a vertical blanking interval of the

video program," in the invention as disclosed above by Szymanski, Spies, and Liao et al. for the

purposes of "set a policy for allowing users to turn on or turn off enhanced TV content, and can

use a trigger arrival as a signal to notify users of enhanced content availability" [page 2 para

0018].

Claim 21:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, but the combination of

Szymanski, Spies, and Liao et al. do not explicitly disclose,

- "the video program is associated with services metadata and the trigger is included with

    the services metadata," although Gorbatov et al. do suggest metadata and triggers, as

    recited below;

however, Gorbatov et al. do disclose,

- "...Enhanced content extracted from a DTV broadcast signal may include a variety of

    enhanced TV resources such as ATVEF triggers to update information displayed on a

visual display (such as the screen of TV 10 or another monitor), Universal Resource

Locators (URLs), metadata, scripts, Java applets, HTML, web pages, images, or other

useful data…") [page 2 para 0014];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "the video program is associated with services metadata and the

trigger is included with the services metadata," in the invention as disclosed above by

Szymanski, Spies, and Liao et al. for the purposes of "set a policy for allowing users to turn on or

turn off enhanced TV content, and can use a trigger arrival as a signal to notify users of enhanced

content availability" [page 2 para 0018].

Claim 22:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, but the combination of

Szymanski, Spies, and Liao et al. do not explicitly disclose,

- "the DVR determines when to store the first unencrypted program of the at least one

  video program based on received metadata," although Gorbatov et al. do suggest the

  DVR storing program segments, as recited below;

however, Gorbatov et al. do disclose,

- "…When an event notification is received indicating the starting of a program segment

  selected by a viewer on a channel, the set top box may cause the recorder to tune to the

  channel and start recording the program segment. When an event notification is received

  indicating the ending of the program segment, the set top box may cause the recorder to

  stop recording the program segment broadcast on the channel…") [page 3 para 0022];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "the DVR determines when to store the first unencrypted

program of the at least one video program based on received metadata," in the invention as

disclosed above by Szymanski, Spies, and Liao et al. for the purposes of "…In this way, event

notifications sent by the broadcast head-end may be used to control recording activity at the

viewer's site" [page 3 para 0022].

Claim 23:

Szymanski, Gorbatov et al., Spies, and Liao et al. disclose a method of providing a video

program in response to a demand by a subscriber, as in Claim 1 above, their combination further

comprising,

- "the first portion of the at least one video program is unencrypted" (i.e. "The interactive

    television signal includes an interactive portion consisting of application code or control

    information, as well as an audio-video portion consisting of a television program")

    [Szymanski column 1 lines 32-35].

4.   Claims 13 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Szymanski (US-6148081-A) in view of Liao et al. ("The Split and Merge Protocol for Interactive

Video-on-Demand") in view of Kahn et al. (US 20080019529 A1).

Claim 13:

Szymanski discloses an apparatus configured to provide a program in response to a subscriber

demand comprising,

- "the digital video recorder comprising: a first unencrypted portion of a program stored on

    the digital video recorder" (i.e. "modularity may include conserving the limited amount

of memory in a set-top box which can be used for interactive applications, reducing the

time required to download applications from a broadcast station to a set-top box or

reducing the amount of application code which must be written by allowing modules to

be shared") [Szymanski column 2 lines 11-17].

- "a first unencrypted portion of at least one program stored on the digital video recorder"

(i.e. "The set-top box receives the signal transmitted by the broadcast service provider,

separates the interactive portion from the audio-video portion and decompresses the

respective portions of the signal") [Szymanski column 1 lines 43-47].

- "an offer to purchase at least one program" (i.e. "the carousel may comprise an electronic

commerce application which allows interactive television users to make purchases via

credit card transactions") [Szymanski column 9 lines 10-13].

- "means for accepting an offer to purchase the program" (i.e. "The credential can be

created by secure means so that it can be determined at run time whether the credential

was in fact created by the producer of the credit card application (which may be referred

to as the "grantor carousel")") [Szymanski column 9 lines 26-30].

- "means for splicing the first unencrypted portion of the program with the remaining

portion of the at least one program to define a complete program" (i.e. "Set-top box 22

processes the packetized signal to reconstruct the television programs and interactive

applications embodied in the signal. The reconstructed applications are executed in the

set-top box, while the reconstructed television programs are passed to the television,

where they are displayed. The interactive applications may generate graphics or audio

which are combined with the television program prior to being displayed") [Szymanski

column 5 lines 35-42].

but Szymanski does not explicitly disclose,

-   "means for retrieving the first unencrypted portion from storage one the digital video

    recorder while retrieving the remaining portion of the program from a headend," although

    Liao et al. does suggest VoD, as recited below;

-   "means for authorizing decryption of the remaining portion of the program," although

    Kahn et al. does suggest decryption of content, as recited below;

-   "means for storing the complete program on the digital video recorder," although Kahn et

    al. does suggest storing content on a DVR/set top box, as recited below;

however, Liao et al. does disclose,

-   "With VoD services, customers may select programs from massive, remote video

    archives, view them when they wish, and interact with the programs using VCR-like

    functions, such as fast forward and rewind" [Liao et al. page 51];

whereas, Kahn et al. does disclose,

-   "In the portion of FIG. 7 labeled "Off-Air Receive," the host IRD 124 receives a data

    stream including the program materials encrypted by the media encryption key CW, as

    well as the encrypted media encryption key EI(CW) itself. The EI(CW) is provided, via

    the TDM 402, to the CAM 414, where it is decrypted by an I/O indecipherable algorithm

    (EI DECR) 700. The result is the unencrypted media encryption key CW" [column 9

    lines 33-42];

- "Once the program materials have been decrypted, they are provided to the source

    decoder 406, which decodes the program materials according to MPEG or other

    standards as appropriate. The decoded program materials may be stored in the PAM 408

    or provided to devices coupled to the IRD 124 via the external interfaces 410, wherein

    the devices coupled to the IRD 124 can include a media storage device 418, such as a

    disk drive, a presentation device 420, such as a monitor, or a networked device, such as

    another IRD 124" [column 6 lines 54-62];

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

applicant's invention to include "means for retrieving the first unencrypted portion from storage

one the digital video recorder while retrieving the remaining portion of the program from a

headend" and "means for authorizing decryption of the remaining portion of the program" and

"means for storing the complete program on the digital video recorder," in the invention as

disclosed above by Szymanski for the purposes of having a storage location to obtain the

requested program content from.

Claim 16:

Szymanski, Liao et al., and Kahn et al. disclose an apparatus configured to provide a program in

response to a subscriber demand, as in Claim 13 above, but Szymanski and Kahn et al. do not

explicitly disclose,

- "triggers inserted into the remaining portion at predetermined transition points for

    identification by the digital video recorder as a point of transition between the first

    unencrypted portion and the remaining portion," although Liao et al. do suggest split and

    merge, as recited below;

however, Liao et al. do disclose,

- "Split and Merge (SAM)" [Liao et al. page 2];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention would have found it to be obvious to include "triggers inserted into the

remaining portion at predetermined transition points for identification by the digital video

recorder as a point of transition between the first unencrypted portion and the remaining portion"

in the invention as disclosed above by Szymanski and Kahn et al. since it is suggested that the

set-top box would require there to be some form of instructions or "triggers" included in the

service's metadata in order to perform specific functions (i.e. "Split and Merge") [Liao et al.

page 52].

5.   Claims 14 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Szymanski (US-6148081-A) in view of Liao et al ("The Split and Merge Protocol for Interactive

Video-on-Demand") in view of Kahn et al. (US 20080019529 A1) in view of Spies (US-

6055314-A).

Claim 14:

Szymanski, Liao et al., and Kahn et al. disclose an apparatus configured to provide a program in

response to a subscriber demand, as in Claim 13 above, but their combination do not explicitly

disclose,

- "the offer to purchase the program further comprises a program guide stored on the

    digital video recorder," although Spies does suggest VOD application, as recited below;

however, <u>Spies</u> does disclose,

- "Each STB 230 is configured to run a video-on-demand (VOD) application (step 304). As noted above, VOD is like having a virtual video store in the subscriber's home. The VOD application presents a user interface which permits the subscriber to browse a wide selection of programs (movies, video games, TV shows, educational features, etc.) and rent the program they want to see immediately from their own TV sets") [<u>Spies</u> column 15 lines 16-23];

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include "the offer to purchase the program further comprises a program guide stored on the digital video recorder," in the invention as disclosed above by <u>Szymanski</u>, <u>Liao et al.</u>, and <u>Kahn et al.</u> for the purposes of alleviating the need to store and access everything remotely, as well as, provide quicker menu access for the subscriber.

Claim 15:

<u>Szymanski</u>, <u>Spies</u>, <u>Liao et al.</u>, and <u>Kahn et al.</u> disclose an apparatus configured to provide a program in response to a subscriber demand, as in Claim 14 above, their combination further comprising,

- "a channel hidden from the program guide but known by the digital video recorder for sending the first unencrypted portion to the digital video recorder for storage thereon" (i.e. "In addition to the broadcast channel between the broadcast station and receiving station, there may be other channels, such as a modem channel (which may also be referred to as an http, or hypertext transfer protocol, channel") [<u>Szymanski</u> column 5 lines 43-47].

6.   Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Szymanski</u>

(US-6148081-A) in view of <u>Liao et al.</u> ("The Split and Merge Protocol for Interactive Video-on-

Demand") in view of <u>Kahn et al.</u> (US 20080019529 A1) in view of <u>Ullrich et al.</u> (US-5583937-

A).

Claim 17:

<u>Szymanski</u>, <u>Liao et al.</u>, and <u>Kahn et al.</u> disclose an apparatus configured to provide a program in

response to a subscriber demand, as in Claim 13 above, but their combination do not explicitly

disclose,

-   "at least a portion of the program is repeatedly transmitted on one of a plurality of

    channels, each repeated transmission separated from a previous transmission by a

    predetermined period of time," although <u>Ullrich et al.</u> do suggest simultaneously

    broadcast and staggered channels, as recited below;

however, <u>Ullrich et al.</u> do disclose,

-   "In order to provide near video on demand (NVOD) services, the a single program or

    performance, labeled as program X in FIG. 3, is exhibited simultaneously on each of

    channels 7073. While each exhibition is simultaneously broadcast on transmission system

    13, the exhibitions are offset or staggered in time relative to one another" [column 7 lines

    64-67 & column 8 lines 1-2];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the

applicant's invention to include, "at least a portion of the program is repeatedly transmitted on

one of a plurality of channels, each repeated transmission separated from a previous transmission

by a predetermined period of time," in the invention as disclosed by Szymanski, Liao et al., and

Kahn et al. for the purposes of the exhibition of different programming.

Claim 18:

Szymanski, Liao et al., and Kahn et al. disclose an apparatus configured to provide a program in

response to a subscriber demand, as in Claim 17 above, but their combination do not explicitly

disclose,

-   "wherein the at least a portion of the program consists of the remaining portion of the

    program," although Ullrich et al. do suggest staggered channels of programs, as recited

    below;

however, Ullrich et al. do disclose,

-   "In the example depicted in FIG. 3, program X has a run length of around 110 minutes

    and a repeat factor of 120 minutes. Thus, on each of channels 70-73, program X is

    exhibited for 110 minutes. When program X finishes, promotional programming is

    exhibited for 10 minutes" [column 8 lines 3-7];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the

applicant's invention to include, "wherein the at least a portion of the program consists of the

remaining portion of the program," in the invention as disclosed by Szymanski, Liao et al., and

Kahn et al. for the purposes of repeating program X every 120 minutes continues indefinitely,

until overall exhibition plans call for the exhibition of different programming.

Claim 19:

Szymanski, Liao et al., and Kahn et al. disclose an apparatus configured to provide a program in response to a subscriber demand, as in Claim 17 above, but their combination do not explicitly disclose,

- "wherein the at least a portion of the program comprises the entire program," although Ullrich et al. do suggest staggered channels of programs, as recited below;

however, Ullrich et al. do disclose,

- "In the example depicted in FIG. 3, program X has a run length of around 110 minutes and a repeat factor of 120 minutes. Thus, on each of channels 70-73, program X is exhibited for 110 minutes. When program X finishes, promotional programming is exhibited for 10 minutes" [column 8 lines 3-7];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "wherein the at least a portion of the program comprises the entire program," in the invention as disclosed by Szymanski, Liao et al., and Kahn et al. for the purposes of repeating program X every 120 minutes continues indefinitely, until overall exhibition plans call for the exhibition of different programming.

Allowable Subject Matter

7.   Claim 24 is objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

Response to Arguments

8.   Applicant's arguments with respect to Claims 1-24 have been considered but are moot in

view of the new ground(s) of rejection as necessitated by their amendments.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684.

The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nasser Moazzami, can be reached at 571-272-4195. The fax phone number for

Formal or Official faxes to Technology Center 2400 is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OSCAR A LOUIE/
08/30/2009

/Nasser G Moazzami/
Supervisory Patent Examiner, Art Unit 2436